• COLORADO RIVER •

AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Vol. III. JANUARY 23, 1936 No. 2

Steel Conduit Forms on Aqueduct Construction Company's Schedule 1.

· COLORADO RIVER ·
AQUEDUCT NEWS
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
LOS ANGELES, CALIFORNIA

Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. III January 23, 1936 No. 2

KEEPING FAITH

On a job replete with engineering triumphs of great magnitude it is easy to overlook other achievements, less spectacular but nevertheless of vital importance.

Such an achievement is that of the Metropolitan Water District Labor Office which, without fuss or feathers, has been quietly and effectively doing its work for these past three years.

Established on January 7, 1933, with Col. Nat F. Jamieson in charge, it has received and classified more than 110,000 labor applications; more than 55,000 applicants have been interviewed, and something more than 25,000 men have been sent to jobs in the field.

The importance of this work cannot be over-estimated. It involves the very bone and sinew of a project on which every record for speed, economy, and safety has been shattered.

And it has been no easy job. Four frequently clashing interests have to be taken into account. First, there is the District's strict rule requiring that only District residents be employed. Second, there is the army of unemployed men, each one of which—whether eligible or ineligible, qualified or unqualified—feels that there must be work with his name on it. Third, there is the District rule that available jobs must be pro-rated among the thirteen District cities. And fourth, there is the necessary requirement that only capable men be sent to the job. And to top it off, there are always the selfish interests which attempt to bore in from all sides—seeking jobs for friends and relatives.

But the District is keeping its pledge to the public. It has been assisted in keeping this pledge by the honest cooperation from the vast majority of the contractors on the aqueduct.

This performance must be continued, for only by continuing it can the District (and through the District, the contractors) keep faith with the Big Bosses —the people of the Metropolitan Water District.

3,000,000 TONS HAULED TO AQUEDUCT LINE OVER THREE YEAR CONSTRUCTION PERIOD

That the building of the Colorado River Aqueduct has required 20,035 freight carloads of materials during the past three years—or enough cars to form a 170-mile freight train—was revealed last week in a carloading report made by General Manager F. E. Weymouth. Such a train, traveling at the average speed of heavy freights, would require twenty-four hours to pass a given point.

Mr. Weymouth's report covered only material hauled by train—a total of approximately 1,000,000 tons. District records reveal that such transportation, including the haulage of concrete aggregates, brings the total up to approximately 3,000,000 tons. It is estimated that the manufacturers of the materials involved required the employment of approximately the same number of men employed directly on the aqueduct—8,000 men.

In addition to the material moved by train, the hauling of the tonnage required approximately 200,000 truck movements in the field to the numerous sites of construction from rail head transfer points, fabricating mills, aggregate, mixing and batching plants. The line hauling from Los Angeles territory, Los Angeles Harbor and other industrial centers of the District, totaled approximately 5,500 truck or truck and trailer trips.

The cost of transportation approximates $1,500,000, distributed to movements ordered direct by the District and movements made by construction contractors under per-ton mile contracts. All of this tonnage has been delivered without a claim being filed for loss, damage or overcharge. In addition, the prompt dispatching, tracing and recording of the immense volume of transportation has been accomplished without a single serious delay to the progress of construction.

A clear and accurate identification of every item transported, large or small, is required, as well as the careful checking and approval of the thousands of railroad and truck freight bills for final settlement. These are a few of the details performed by O. T. Helpling and Ross C. Musser of the Transportation Department under the supervision of S. A. Joseph of the Purchasing Division.

On the basis of the 170-mile train mentioned above, statisticians reveal that by the time the aqueduct project is completed its construction will have consumed sufficient materials, supplies and equipment to form a solid train of freight cars somewhat longer than the 390-mile aqueduct system itself—or long enough to extend from Los Angeles to San Francisco.

NEW UNITS TO BE STARTED

Preparations are being made for the launching of work on new construction, involving $7,423,486, which has been authorized by the board of directors of the Metropolitan Water District on the distribution system of the Colorado River Aqueduct.

Acting on the recommendation of General Manager F. E. Weymouth, the Water District board awarded contracts totaling $5,578,928 for the construction of sixteen and one-half miles of pipe line and a steel bridge which will carry the aqueduct line across the Santa Ana River. The cost of materials, engineering, and other items to be furnished by the District will be $1,844,558.

The Western Pipe and Steel Company was awarded contracts for the construction of the 900-foot bridge and for the building of ten and one-third miles of steel pipe line, the contract price of this work being $4,207,038.

The American Concrete and Steel Pipe Company was awarded the construction of approximately six miles of precast concrete pipe line at a contract price of $1,371,890.

The new line will begin on the north side of Cajalco reservoir, terminal storage basin at the western end of the main aqueduct, and will extend almost due north, past Arlington and through the Pedley Hills, to a point in Fontana between Valley and Foothill boulevards.

At that point the new line will connect with other aqueduct sections already under contract, extending west toward Los Angeles and the twelve other cities of the District.

Supt. E. A. Bernard and Supt. Ben Arp of Iron Mountain Tunnel.

FINISH IRON MT. EXCAVATION

Conquest of another major tunnel of the Metropolitan Water District Aqueduct from the Colorado River—the seven and one-half mile Iron Mountain bore—was completed last week when Winston Brothers crews drove to daylight at the tunnel's east portal.

Third longest of the aqueduct's thirty-six tunnels, the Iron Mountain tunnel is surpassed only by the eighteen-mile East Coachella bore and the thirteen-mile San Jacinto tunnel. It was driven by crews of the Utah Construction Company and Winston Brothers under contracts with the Water District.

Work on the bore was carried forward under the direction of Ben Arp, superintendent for the Utah Company, and E. A. Bernard, superintendent for Winston Brothers.

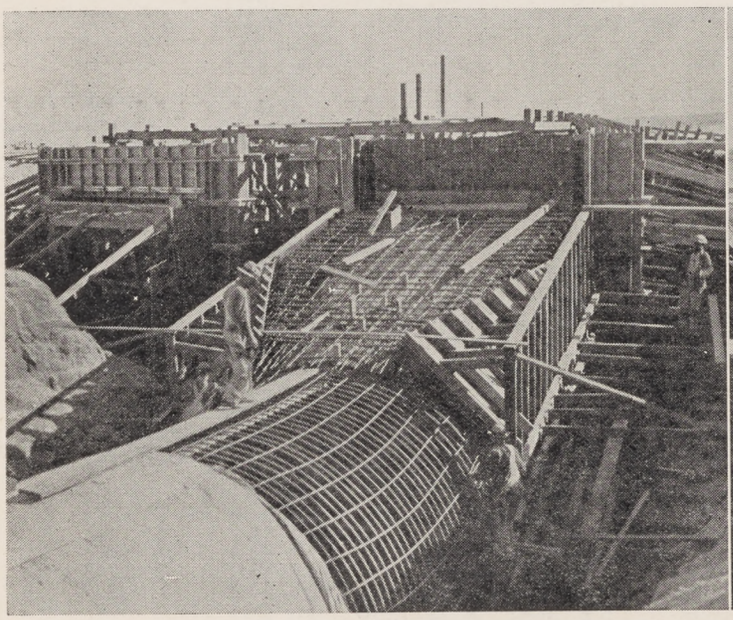
San Diego Officials Make Inspection

Nine members of San Diego's official family, headed by City Manager R. J. Flack and Mayor P. J. Benbough, spent three days last week on an inspection trip over the route of the Metropolitan Water District's Colorado River Aqueduct project.

The San Diego officials were accompanied by Vice-Chairman Franklin Thomas and Secretary S. H. Finley of the Water District board of directors. Mr. Thomas is chairman and Colonel Finley a member of the board's special committee now considering inquiries from a number of Southern California cities which are studying the possibility of sharing in the use of Colorado River Aqueduct water.

For several years San Diego officials have been studying the problem of securing a supply of Colorado River water for that city, and recently their attention has been directed toward the Metropolitan Water District Aqueduct. San Diego is not now included in the thirteen cities which comprise the Metropolitan Water District.

Included in the official San Diego party making the aqueduct trip were Chief Water Engineer Fred D. Pyle, Director of Public Works F. A. Rhodes, Councilmen Walter C. Wurfel and Bruce R. Stannard, Water Commissioners A. V. Mayrhofer and J. M. Anderson, and Assistant City Attorney H. B. Daniels.



A Wood & Bevanda transition, "before and after." J. W. ("Sam") Gawlett, carpenter foreman, who sent in these shots, has this to say about the above structures: "Perhaps the most crooked, twisted, forked, sloping, slanting, tapering, distorted thing along the line; but after it's done, quite practical, graceful, and good looking.

CONSTRUCTION PROGRESS

December 15, 1935, to January 15, 1936

TUNNEL EXCAVATION (MILES)

	Completed	Remaining
Aqueduct	72.30	8.62
Distribution	8.07	7.64
Total	80.37	16.26

CANAL, CONDUIT AND SIPHON (MILES)

	Completed	Remaining
Excavation	82.61	60.89
Concrete	57.93	84.51
Back fill	18.64	62.08

* TUNNEL LINING (MILES)

	Completed	Remaining
Aqueduct	26.43	76.44
Distribution	0	15.69
Total	26.43	92.13

* Arch considered to equal 0.9 of completed section.

TUNNEL PROGRESS

CONTRACTOR	TUNNEL	LENGTH IN FEET	EXCAVATION IN FEET					LINING IN FEET					
			NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAINING	ARCH OR INVERT	NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAINING
AQUEDUCT—CONTRACT													
WALSH CONSTRUCTION CO.	COLORADO RIVER	5,482		Completed		5,482	0	Arch			0	5,475	7
								Invert				0	5,482
	COPPER BASIN NO. 1	705		Completed		705	0	Arch			0	696	9
								Invert				0	705
	COPPER BASIN NO. 2	11,568		Completed		11,568	0	Arch	45	93.6	3,218	11,568	0
								Invert				0	11,568
	WHIPPLE MOUNTAIN	(32,238)				(32,238)	(0)					0	(32,238
	East from Adit	18,336		Completed		18,336	0						
	West from Adit	13,902		Completed		13,902	0						
WINSTON BROTHERS	IRON MT (E. PORTION)	(23,645)				(23,643)	(2)					0	(23,645
	East from Shaft	9,902	55	5.2	286	9,900	2						
	West from Shaft	13,743		Completed		13,743	0						
UTAH CONSTRUCTION CO	IRON MT. (W. PORTION)	16,172		Completed		16,172	0					0	16,172
WINSTON BROTHERS	COXCOMB (From E. Portal)	17,795	60	7.8	466	17,109	686					0	17,795
BRODERICK & GORDON	E. EAGLE (From W. Portal)	9,442	52	8.1	440	8,411	1,031					0	9,442
	W. EAGLE (E. PORTION)	(15,845)				(15,845)	(0)					0	(15,845)
	East from Adit	7,871				7,871	0						
	West from Adit	7,974				7,974	0						
L. E. DIXON & BENT BROS.	W. EAGLE (W. PORTION)	10,649		Completed		10,649	0	Arch	6	58.2	349	10,649	0
								Invert	50	54.9	2,744	2,744	7,905
DRAVO CONTRACTING CO.	VALVERDE	(38,015)				(37,452)	563						
	East Portal to Shaft 3	21,415		Completed		21,415	0	Arch	84		3,832	20,632	17,383
	West from Shaft 3			Completed		8,964		Invert	45		611	10,057	27,958
	East from Adit	12,067		Completed		3,103	0						
	West from Adit	4,533	84	2.6	220	3,970	563						
	TOTALS Ft.	181,556	251	23.70	1,412	179,274	2,262	Arch	230	206.7	7,399	49,020	132,536
	Miles	(34.39)			(0.27)	(33.95)	(0.43)	Invert			3,355	12,801	168,775
AQUEDUCT — FORCE ACCOUNT													
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	EAST COACHELLA	(96,605)				(96 605)	0					16,285	80,320
	East Portal to Fargo Adit	32,130		Completed		32 130	0	Arch	72	45.4	3,268	10,988	21,142
	West from Fargo Adit	31,024	31	8.5	263	14 703	0					0	31,024
	East from Berdoo Adit		40	8.5	341	16,321	0						
	Berdoo Adit to West Portal	33,451		Completed		33.451	0	Arch	70	43.4	3,039	5,297	28,154
	1000 PALMS NO. 1 (From W.P.)	16.058	18	10.2	184	16.058	0					0	16.058
	1000 PALMS NO. 2	3,838		Completed		3,838	0	Arch	—	—	0	3,838	0
								Invert	9	237.0	2,128	3,838	0
	WIDE CANYON NO. 1	14.305		Completed		14,305	0	Arch				14,305	0
	WIDE CANYON NO. 2	848		Completed		848	0	Arch			0	848	0
	SEVEN PALMS (From E. Prtl)	4.810		Completed		4.810	0	Arch	25	52.5	1,310	4,766	44
	(From W. Prtl)	11.920		Completed		11.920	0					0	11,920
	LONG CANYON (From E. Prtl)	15.295	75	10.2	763	13,803	1,492					0	15,295
	BLIND CANYON	6,848			0	5,580	1,268					0	6,848
	MORONGO NO. 1	5.712			0	5,364	348					0	5.712
	MORONGO NO. 2	1.820				0	1.820					0	1.820
	SAN JACINTO	(67.663)				(29.367)	(38.296)					0	(67,663)
	Cabazon Shaft to East Portal	8,653	87	5.3	465	5.330	3,323						
	West from Cabazon Shaft		87	5.1	444	8,130							
	East from Potrero Shaft	43,511	87	0	0	1,973	33,408						
	West from Potrero Shaft		87	5.1	440	4,418							
	From West Portal	15,499	87	7.3	636	9,516	1,565						
	TOTALS Ft.	245,722	599	60.2	3,536	202,498	43,224	Arch	167	141.3	7,617	49,042	205,680
	Miles	(46.54)			(0.67)	(38.35)	(8.19)	Invert					

Directory

BOARD OF DIRECTORS

W. P. Whitsett, Chairman
Franklin W. Thomas, Vice-Chairman
S. H. Finley, Secretary

Anaheim ..... E. P. Hapgood
Beverly Hills ..... Arthur Taylor
Burbank ..... J. L. Norwood
Compton ..... Warren W. Butler
Fullerton ..... Walter Humphreys
Glendale ..... Bernard Brennan
Long Beach ..... William M. Cook
Los Angeles ..... I. Eisner
Los Angeles ..... Perry H. Greer
Los Angeles ..... Otto J. Emme
Los Angeles ..... D. W. Pontius
Los Angeles ..... John R. Richards
Los Angeles ..... Victor H. Rossetti
Los Angeles ..... W. P. Whitsett
Pasadena ..... Franklin Thomas
San Marino ..... J. H. Ramboz
Santa Ana ..... S. H. Finley
Santa Monica ..... W. H. Carter
Torrance ..... Charles T. Rippy

Charles H. Toll, Treasurer
D. W. Pontius, Controller

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General Manager and Chief Engineer ..... F. E. Weymouth
Asst. Gen. Mgr., ... J. L. Burkholder
Asst. Chief Engineer ..... Julian Hinds
General Counsel, James H. Howard
Asst. Gen. Coun,. Arthur A. Weber
Asst. Controller ..... J. M. Luney
General Supt. ..... James Munn
Chief Elec. Engineer, J. M. Gaylord
Asst. to Gen. Mgr., Don J. Kinsey
Secretary to General Manager ..... Elisabeth von Hagen

DIVISION ENGINEERS

Division 1 ..... R. C. Booth
Division 2 ..... W. E. Whittier
Division 3 ..... John Stearns
Division 4 ..... B. C. Leadbetter
Divisions 5 & 6 ..... J. B. Bond
Distribution ..... R. B. Diemer

SUPERINTENDENTS
(Main Aqueduct Tunnels)

Colorado River, Copper Basin and Whipple Mt. Tunnels, Walsh Construction Co., W. A. Huntington and L. M. Ramey, Tunnel Supts.

Coxcomb Tunnel and Iron Mt. shaft, Winston Bros., E. A. Bernard, Gen. Supt.; F. T. Hillman and R. V. Johnson, Tunnel Supts.

Iron Mt. Tunnel, West Portal, Utah Construction Co., Ben Arp, Gen. Supt.

East Eagle Mt. Tunnel and West Eagle Mt. Tunnel, east portion, Broderick & Gordon, C. J. Kavanagh, Gen. Supt.

West Eagle Mt. Tunnel, west portion, L. E. Dixon and Bent Bros., P. C. Guinn, Gen. Supt.

Hayfield Tunnel No. 1, Hunkin & Conkey Constr. Co., G. B. Hoag, Gen. Supt.; F. Backlund, Tunnel Supt.

Cottonwood Tunnel, J. F. Shea Co., Inc., Gilbert Shea, Gen. Mgr.; Wallace Young, Master Mechanic.

Coachella Division, B. C. Leadbetter, Gen. Supt.

Fargo Adit, E. Coachella Tunnel—
Dist. Force Acct., Neil O'Donnell
Pushawalla Adit, and Berdoo
Aggregate plant,
[illegible]ella Tunnel—
Dist. Force Acct., John Austin.
Thousand Palms—
Dist. Force Acct

	West from Cabazon Shaft		87	5.1	444	8,130								
	East from Potrero Shaft	43,511	87	0	0	1,973	33,408							
	West from Potrero Shaft		87	5.1	440	4,418								
	From West Portal	15,499	87	7.3	636	9,516	1,565							
	TOTALS Ft.	245,722	599	60.2	3,536	202,498	43,224	Arch	167	141.3	7,617	49,042	205,680
	Miles	46.54			(0.67)	(38.35)	(8.19)	Invert	9	237.0	2,128	3,838	241,884

DISTRIBUTION—CONTRACT

WEST CONSTRUCTION CO.	MONROVIA NO. 1 (From W.P.)	7,865	83	12.3	1,019	6,922	943						0	7,865
	MONROVIA NO. 2 (From Jct. 1)	940			0	298	642						0	940
	MONROVIA NO. 3 East from Adit	(32,105)				(11,543)	(20 562)						0	(32,105)
	West from Adit	11,340	83	10.4	866	2 826	8,514							
	From West Portal	20,765	76	3.8	290	2,146	12,048							
		20,765	83	12.4	1,026	6,571								
DIXON, BENT BROS. & JOHNSON	MONROVIA NO. 4 (From W.P.)	8.096	85	7.2	613	1,064	7,032						0	8,096
J. F. SHEA CO., INC.	SIERRA MADRE (From E. Prtl)	6,450	50	22.8	1,144	3.967	2,483						0	6,450
DIXON, BENT BROS. & JOHNSON	PASADENA EAST	5,604	50	24.4	1,221	4,302	1,302						0	5,604
	PASADENA (From West Portal)	12,140			Completed		0						0	12,140
	SAN RAFAEL No. 1 (From W.P.)	4.077	85	7.8	647	2,394	1,683						0	4.077
	SAN RAFAEL No. 2 (From E.P.)	5,661			0	0	5,661						0	5,661
	TOTALS Ft.	82,938	593	11.5	6,826	42,630	40,308						0	82,938
	Miles	(15.71)			(1.29)	(8.07)	(7.64)							

CANAL, CONDUIT AND SIPHON PROGRESS—PROGRESS PERIOD—DEC. 28, 1935, TO JAN. 11, 1936

SCHED. NO.	CONTRACTOR	FEATURES	Length in Feet	EXCAVATION—Feet			CONCRETE—Feet			BACKFILL—Feet		
				Period	To Date	Remain'g	Period	To Date	Remain'g	Period	To Date	Remain'g
1	AQUEDUCT CONSTR. CO.	Conduit and Siphons	22,025	1,240	14,515	7,510	1,644	7,554	14,471	1,090	5,400	16,625
2	BARRETT & HILP AND MACCO CORP.	Conduit and Siphons	30,569	235	17,953	12 616	2,126	4,320	26 249	619	1,050	29,519
3		Canal and Siphons	40,849	0	37,054	3,795	4,310	15,406	25,443		0	12,695
4	JAHN & BRESSI CONSTR. CO.	Canal and Siphons	53,218	3,175	37 375	15,843	5,008	7,282	45,936		0	3,075
5		Canal and Siphons	53,588	130	52,768	820	460	52,613	975	0	600	3,420
6	WOOD AND BEVANDA	Siphon	15,520	1.680	4,310	11,210	917	917	14,603		0	15,520
7	BARRETT & HILP & MACCO Cor.	Canal and Conduit	27,727	2.677	27,567	160	4,247	27,567	160	0	11.200	1.150
8	WOOD AND BEVANDA	Canal and Siphons	49,559	0	49,190	369	0	48,860	699	0	6.683	1,209
9	UTAH CONSTRUCTION CO.	Canal, Conduit and Siphons	47,449	2.200	32,830	14.619	1,496	22,069	25,380		178	6,109
10	AQUEDUCT CONSTR. CO.	Canal and Siphons	41,505	200	39,195	2,310	2,784	33,237	8,268		480	4,410
11		Canal, Conduit and Siphons	44,507		0	44,507		0	44,507		0	10,462
12	THREE COMPANIES, INC.	Conduit and Siphons	33,446	71	27,051	6,395	1,962	14,046	19,400	823	*11 513	21 933
13	AQUEDUCT CONSTR. CO.	Canal, Conduit and Siphons	33,270	513	540	32,730		0	33,270		0	4,075
14	THOMPSON-STARRETT CO.	Conduit and Siphon	32,366	608	21,426	10,940	1,741	12,516	19,850	2,595	8,200	24 166
15		Conduit and Siphons	35,849		0	35,849		0	35,849		0	35,849
16		Conduit and Siphons	19,359		0	19,359		0	19,359		0	19,359
17	M. W. D.—FORCE ACCT.	Conduit and Siphons	22.119	490	6,855	15,264	517	1,110	21,009	84	*84	22,035
18	J. F. SHEA CO., INC.	Conduit and Siphons	27,564	227	1,305	26.259		0	27,564		0	27,564
18J	MORRISON-KNUDSEN CO.	Siphons	9.811	165	7,725	2,086	505	6,630	3,181	0	3,170	6,641
19	J. F. SHEA CO., INC.	Conduit and Siphon	37,464		0	37,464		0	37,464		0	37,464
20		Siphons	18,618	0	18,618	0	0	18,618	0	0	18,618	0
20 A & B	GRIFFITH COMPANY (Outlet Channel Unlined)	Siphons	735	0	705	30		0	735		0	735
21		Siphons	14,613	1,500	12,500	2,113	631	10,966	3,647	1,650	10,265	4,348
22		Siphon	7.229		0	7.229		0	7,229		0	7,225
23		Conduit and Outlet Channel	38,699	985	26,700	11,999	323	22,160	10,989	350	20,967	12,182
	TOTALS		757,658	16,096	436,182	321,476	28,671	305,871	446,237	7,211	98,408	327,770

COMPLETED FEATURES *Adjusted Totals

TUNNELS

CONTRACTOR	TUNNEL	Length in Miles	Work Started	Work Completed
MORRISON-KNUDSEN CO.	MECCA PASS Nos. 1, 2 & 3	1.13	7-17-33	2-10-35
WEST CONSTRUCTION CO.	WHITEWATER Nos. 1 & 2	1.94	7-18-33	4-15-35
SHOFNER & GORDON	HAYFIELD No. 2	1.03	7-8-33	7-27-35
HAMILTON & GLEASON	BERNASCONI	1.18	4-19-33	11-21-35
J. F. SHEA CO., INC.	COTTONWOOD	3.81	6-14-33	12-29-35
HUNKIN-CONKEY CON. CO.	HAYFIELD NO. 1	1.84	10-21-33	1-9-36
	Total	10.93		

CANAL, CONDUIT AND SIPHON

CONTRACTOR	FEATURE AND NAME OR SCHEDULE	Length in Miles	Work Started	Work Completed
UNITED CONC. PIPE CO.	LITTLE MORONGO SIPHON	0.13	2-27-34	8-20-34
M.W.D.—FORCE ACCT.	FAN HILL COND. & SIPHON	0.32	10-21-33	11-19-34
GRIFFITH COMPANY	SCHEDULE NO. 20-C	1.33	5-3-35	9-14-35
	TOTALS	1.78		

Dist. Force Acct., Neil O'Donnell
Pushawalla Adit, and Berdoo Aggregate plant,
[illegible]nella Tunnel—
Dist. Force Acct., John Austin.
Thousand Palms—
Dist. Force Acct.....
.....Lyle McMillen, Gen. Fore.
Wide Canyon—
Dist. Force Acct., ...
.....Kenneth MacIsaac
Long Canyon—
Dist. Force Acct.,.....C. E. Sides
San Jacinto Tunnel, District Force Account, C. R. Rankin, Gen. Supt.; Frank Laird, Tunnel Supt.; E. E. McCabe, W. L. Taylor, and Jack Stone, Tunnel Supts.
Bernasconi Tunnel, Hamilton & Gleason Co., Harry S. Stocker, Gen. Supt.
Valverde Tunnel, Dravo Contr. Co., R. W. Remp, Gen. Supt.; H. C. Richardson, Asst. Gen. Supt.; Fred Youmans, Tunnel Supt.; John Will, Concrete Supt.

(Distribution Tunnels)

Monrovia tunnels, West Construction Co., H. E. Carleton, Gen. Supt.; O. V. Humason, Peter Brisbois, and Angus MacDonnell, Tunnel Supts.
Sierra Madre tunnel, J. F. Shea Co., Inc., Edmund H. Shea, Supt.
Pasadena tunnel, San Rafael tunnels Nos. 1 and 2, and Monrovia tunnel No. 4, L. E. Dixon Co., Bent Bros., Inc., and Johnson, Inc., H. J. King, Gen. Supt.; D. L. Simpson, L. E. Bury and P. C. Guinn, Supts.

(Canal, Siphon, Conduit)

Schedules Nos. 1, 1A, 1B, 10, 10A, 10B, 11, 11A, 11B, 11C, 13, 13A, and 13B, Aqueduct Construction Co., C. M. Elliott, Gen. Supt.; Charles Harlowe, Jr., Excav. Supt., and Charles Clapp, Supt.
Schedules Nos. 2, 2A, 2B, 3, 3A, 3B, 7 and 7A, Barrett & Hilp and Macco Corp.; H. W. McKinley, Supt.
Schedules Nos. 4, 4A, 5 and 5A, Jahn & Bressi Construction Co., Joseph Muscolo, Gen. Supt.; Dominick Bressi, Asst. Gen. Supt.
Schedules Nos. 6, 8, 8A and 8B, Clyde W. Wood and M. J. Bevanda, A. F. Weesner, Gen. Supt.; L. L. Green, Excav. Supt.; A. V. Fisher, and V. S. Price, Concrete Supts.
Schedules Nos. 9, 9A, 9B and 9C, The Utah Construction Co., Ben Arp, Gen. Supt.; E. C. Caldwell, Excav. Supt.
Schedules Nos. 12 and 12A, Three Companies, Inc., C. J. Kavanagh, Supt.
Schedules Nos. 14, 15 and 16, Thompson-Starrett Co., Inc., Rodney Smith, Resident Engineer; William Hayes, Excav. Supt.; Thomas McIlvenna, Concrete Supt.
Schedule 17, Dist. Force Acct., H. Hjalmarson, Supt. (Fan Hill) and P. J. Lynch, Supt. (Wide Siphon).
Schedule 18J, Morrison-Knudsen, J. O. Young, Gen. Supt.
Schedules Nos. 18, 19, and 20, J. F. Shea Co., Inc., H. F. Rennebohm, Supt.
Schedules Nos. 20A, 20B, 20C, 21, 22 and 23, The Griffith Co., Harry Davis, Supt.

(Dams)

Cajalco dam, The Griffith Co., Rex B. Sawyer, Gen. Supt.
Parker dam, Six Cos., Inc., Perry Yates, Gen. Supt.

Femininity Relieves Drab Pages of News

Dolorous complaints have long been reaching the NEWS office against the unrelieved masculinity of the magazine. Strong, silent men of the wide open spaces are well enough, complainants say, but a little femininity now and then would be a welcome relief.

These plaintive wails struck a responsive chord in the editor's heart—the editor, himself, being sick unto death of gazing at the photographic likenesses of brawny aqueduct builders (who probably wouldn't be worth shucks, anyway, if it weren't for the feminine members of their households).

So, the feminine touch is presented below—members of the far-famed Ocotilla Club which is composed of ladies of Divisions 2 and 3.

Top row, reading from left to right: Mrs. Byron Hill, Miss Sue Hoffman, Mrs. W. E. Whittier, Mrs. W. G. Knox, Mrs. D. B. Tucker, Jr., Miss Marjorie Knox, Mrs. John Stearns, Mrs. Alton Harrison, Mrs. Allison B. Polley.

Bottom row, reading from left to right: Mrs. George S. Smith, Mrs. R. H. Lindsey, Mrs. Roy L. Taunton, Mrs. D. C. Walker, Mrs. Frank Ellis, and Mrs. Courtland Munn.

Feminine Relief (see above).

GENERAL MANAGER REVIEWS ACTIVITIES OF THE MONTH

(EDITOR'S NOTE: The following is a brief summary of some of the District's activities as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in January, covering work done during December.)

Miscellaneous Activities Division

During December, 928 employment applicants were cleared through the District's Labor Employment Office as eligible, from the standpoint of residence, for work on the aqueduct. Of this number, 365 were made available in response to requisitions on force account work, and 563 were made available for aqueduct contractors.

Legal Division

All necessary documents to procure payment of Interim Certificates numbered 30 and 31 in the principal amounts of $1,512,000 were prepared, and payment secured on December 9 and 10 respectively. Transcript of proceedings on the sale of $12,096,000 bonds made on December 13 was prepared and forwarded to bond counsel and to the R. F. C.

Field Engineering and Construction

Testing Laboratory—During December approximately 269,000 barrels of cement from the Colton, Riverside, Victorville, and Monolith mills were sampled and tested. A total of 769 concrete specimens was received from the work in the field and prepared for test.

Operation of Utilities—During December a total of 6,975,710 kwhr of power was used, about 12,195 (long distance) telephone calls were handled, and 5,056,352 cubic feet of water was delivered.

Aqueduct Construction — (See table on Pages 4 and 5 for current progress figures.)

Civil Engineering Division

Contracts—Three contracts in the aggregate amount of $1,851,662.25 were executed during the month.

Specifications — Three sets of specifications for work and materials were issued during the month; bids under four previously issued specifications were received.

Design — Studies and specification drawings for the reservoir and appurtenant structures required in connection with the Eagle Mountain pump plant were made during the month.

Electrical Engineering Division

At Caltech hydraulic laboratory tests were conducted on the model pumps submitted by bidders on Specifications 116, covering the main aqueduct pumps. In South San Francisco checking was continued on the manufacturer's shop details for the 230-kv transmission line towers. The first test tower was completed and is being tested at the plant of the Pacific Coast Steel Corporation. The contractor on the 230-kv line commenced work on December 2, drilling holes and driving pilings for footings in Danby Dry Lake. Award was made on December 20 for 50,000 porcelain suspension insulators to be used in the construction of the transmission line. Staking of the Boulder telephone line was completed on December 19, and work was started by the contractor on the 10th.

Personnel Division

The net turnover for all divisions for the month of November was 11.07 per cent, compared with 10.80 per cent for October.

Purchasing Division

(See story on Page 3 of this issue.)

Accounting and Costkeeping

Actual costs up to December 31, 1935, amounted to $63,890,985.05, covering works and activities, the total cost of which is estimated at $128,584.487.

NEWS FROM FIELD AND OFFICE

The Los Angeles Office Tennis Club ladder as of January 18 was as follows: 1. Johnson, 2, Skinner, 3. Osgood, 4. Dennis, 5. MacConaghy, 6. Cheatham, 7. Anderson, 8. Ingram, 9. Brandt, 10. Winzell, 11. Swinford, 12. Gumensky, 13. Davis, and 14. Maier. According to President Merrill Johnson of the club, courts have been leased at the Hollenbeck Y. M. C. A. and, so far, six men and three women employees have turned out. The monthly charge has been reduced from thirty-five cents to twenty-four cents and the club welcomes anyone interested in tennis. May has been set as the tentative time for an all-office tournament and as the ladder will be used as a seeding basis, it will behoove members to climb as high as possible before that time.

* * *

Winston Brothers & William C. Crowell crews started work, January 6, on excavation on the Gene pressure conduit in connection with the Gene Pumping plant of the aqueduct. On the same day, work was begun on lowering of the grade of the approach to Intake pumping plant. Construction of the job office, near Division 1 headquarters, is nearing completion.

* * *

Field Clerk R. R. Lackey of Division 5 has been transferred to the Boulder Dam transmission line.

Since only one heading, at Long Canyon, is still working on the Coachella Division, the awarding of a progress flag has been discontinued.

The Safety Flag for December, however, went to Wide Canyon Camp.

On the San Jacinto tunnel, West Portal Camp won the safety flag for December.

Harold M. Stanier, concrete inspector on Division 6, and Miss Dorothea Edmondson of Los Angeles were married on November 23 at the Little Church Around the Corner in Hollywood. The bride was very lovely. The groom was nervous. The couple spent their honeymoon in San Francisco and Yosemite. They will be at home at 134 Santa Rita Place, Banning.

AQUEDUCT TEMPERATURES

January 1 to 15, 1936

	Max.	Min.
Div. 1	73°	36°
Div. 2	70°	34°
Div. 3	71°	35°
Div. 4	67°	45°
Divs. 5 and 6	72°	30°

J. F. Shea Company crews on the Sierra Madre tunnel of the Distribution System turned in another big day January 20. Two shifts a day are being worked on the job at the present time. On the 20th one shift drove 43 feet and the other pushed the tunnel ahead 31 feet, a total of 74 feet for the day. The job was started October 2, and 4,226 feet have been driven since that date, leaving approximately 2200 feet yet to go.

* * *

A building permit has been issued to the District by the city of Banning for the construction of a corrugated iron warehouse adjacent to the field headquarters buildings in Banning at an estimated cost of $2,300. A second warehouse at a cost of $700 is also shown in the permit.

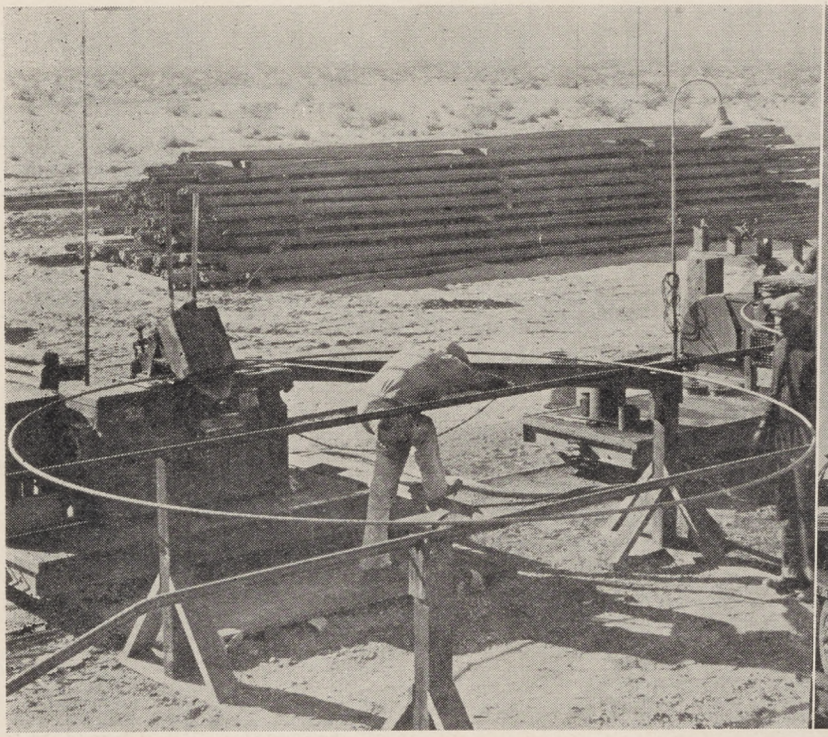
* * *

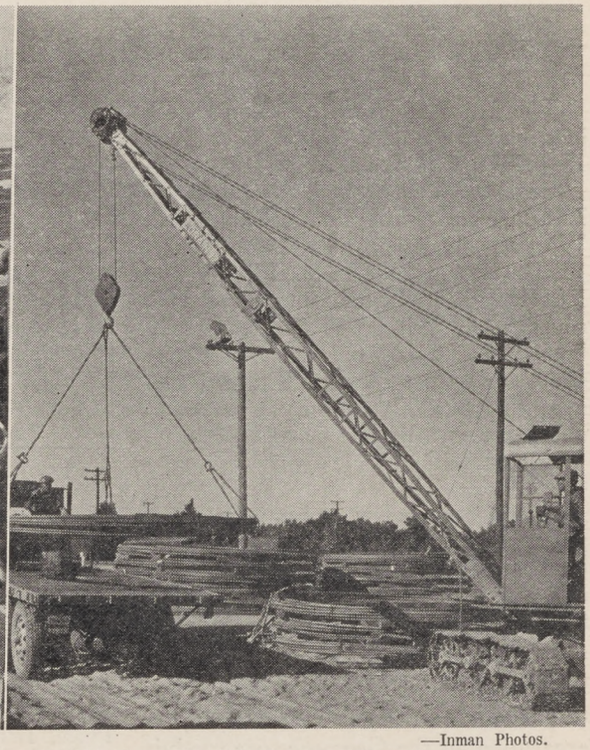
Safety Engineer T. W. Osgood calls attention to the fact that the Coachella Division, during 1935, showed a 52 per cent decrease in lost-time accident frequency. The Coachella Division lost-time accident frequency for 1935, it also is pointed out, is 62 per cent below the California State average.

* * *

R. P. Bushey of the Operating Division has been transferred to the Boulder Dam transmission line.

Here they are, folks, the winnahs! In short, the lucky stiffs who drew the right numbers in the holing through pool at Berdoo January 2. On the left is H. C. Marble, Fargo miner, whose ticket read 12:28 P. M., and who is, as a result $175 richer. In the center is A. J. Hatt, Fargo motorman and luckiest stiff of all. He drew 12:27 P. M., which hit the time right on the nose and netted the tidy sum of $350. On the right is G. Gordon Pickett, pumpman at Portrero, who was holder of the ticket marked 12:26 and who walked away with the other $175 prize.





—Inman Photos.

They're rolling hoops out on the aqueduct these days, but not in the proverbial manner. The aqueduct hoops are not the kind you push, but rather of the variety used to make concrete siphons tough. Since early in November, the Freda and Indio fabricating establishments have fabricated and welded nearly 2,800 tons of steel, turning out approximately 49,000 hoops, which is about 400 hoops per shift at each plant. Approximately 12 men per shift are employed at each plant. The scene at left above is at Freda and the one at the right is at Indio.

Wood-Bevanda Low On Iron Mt. Plant

Adding another important unit to the Colorado River Aqueduct construction schedule, Metropolitan Water District engineers last week opened bids on the building of the Iron Mountain pumping plant, one of five similar stations which will lift Colorado River water a total of 1,600 feet between the river and the cities of the Water District.

The apparent low bid of $718,355 was submitted by the construction firm of Wood and Bevanda, of Stockton. The estimated cost of materials, engineering, and other items to be furnished by the District is approximately $380,000, making the total cost of the job, on the basis of yesterday's bids, approximately $1,098,000. These figures cover the cost of the pumping plant, a small reservoir, and other works.

There were seven bids submitted on the work, the prices ranging as high as $1,048,612. District engineers emphasized the fact that the figures released are tentative since a check and analysis of the complicated bidding sheets has not yet been completed.

Consuming 60 pounds of cake and 400 pounds of turkey, Wide Canyon Camp celebrated the New Year with gusto. The kitchen engineers who put on the feed, reading from left to right above, are Herman Laux, Harry Cheney, Linley Pease, Lee Fraser (who was chief engineer on the job), and last but not least, Burke, the baker. The camerman (Frank Tamborin) says he doesn't know much about picture-taking, but he does know his vegetables.

Safety On the Aqueduct

Those present at the Broderick & Gordon safety meeting January 7 at the Cajalco diversion tunnel job were S. R. Funsett, W. D. Johnson, William Sanders, J. B. Wilson, Grant Naylor, Harry House, C. R. Sparks, Oscar Stone, Charles Carlson, and Kenneth Simpson.

Since there were no accidents at all during the month of December, the section of the meeting devoted to accident investigation was exceedingly short and sweet.

With a view to continuing this excellent record, however, several suggestions were made. Mr. Naylor suggested that all shift bosses should see to it that the jumbo wings are down before the jumbo is brought out. Mr. Funsett warned the shifters to be sure that the men do not ride out of the tunnel on the powder can, and Mr. Sanders requested that the men be particularly careful with the gasoline lantern while it is in use.

Mr. Funsett is chairman of the group and W. D. Johnson is secretary.